

Intake Manifold Measurement

The rubber part between the carburettor and the head, and the four dimensions that decide whether a replacement will do the job.

PETROL AND A RUNNING ENGINE

The leak test below is done with the engine idling and involves spraying near the intake. Use a spray that is not aggressively flammable, do it outdoors, keep the spray away from the exhaust and from any ignition source, and use short bursts. If you are not comfortable with that, skip it and inspect by flexing the rubber instead.

PRINT CALIBRATION — CHECK BEFORE MEASURING



Lay a steel rule along this scale. The 150mm mark must fall at exactly 150mm. If it does not, reprint at 100% / "Actual size" with page scaling off — every measurement you take from a scaled sheet will be wrong.

THE FOUR DIMENSIONS

CARBURETTOR SPIGOT OUTSIDE DIAMETER

mm

The carburettor clamps OVER this

HEAD PORT BOLT SPACING

mm

Centre to centre

OVERALL LENGTH

mm

Flange face to spigot end

ANGLE AND OFFSET

Straight, or does it kink and which way?

BORE THROUGH THE MANIFOLD

mm

NUMBER OF PORT BOLTS

PORT BOLT THREAD SIZE

VACUUM SPIGOT PRESENT?

VACUUM SPIGOT OUTSIDE DIA

mm

ONE-PIECE OR RUBBER JOINER?

WHERE THEY SPLIT

- ☐ On the underside of the rubber, where you cannot see without a mirror
- ☐ At the base of the spigot, where the clamp squeezes it
- ☐ Along a moulding line
- ☐ Around the vacuum spigot's base
- ☐ At the flange, where rubber meets metal or plastic

Flex it with your fingers while you look. A perished manifold often looks fine at rest and opens a visible crack when bent — which is exactly what engine vibration does to it thousands of times a minute.

THE LEAK TEST

1. Get the engine idling and warm enough to hold a steady idle.
2. Spray a short burst at ONE joint only — the manifold-to-head flange, then the manifold rubber itself, then the carburettor-to-spigot clamp, then each vacuum hose.
3. Watch and listen after each burst. If the idle speed or the engine note changes, that joint is drawing air.
4. Wait for the idle to settle again before testing the next joint. Testing several at once proves nothing.
5. Record which joint changed the idle, if any.

JOINT TESTED	IDLE CHANGED?	HOW

SKETCH THE MANIFOLD, SHOWING THE ANGLE

The kink and offset matter as much as the diameters

THIS SHEET RECORDS, IT DOES NOT RECOMMEND

Nothing here tells you which part to buy. It tells you what you currently have, in the units a seller works in. Machines built to the same nominal specification were fitted with different components by different suppliers, sometimes inside one model year, so the only reliable reference is the item in your hand.

Need to work out what you actually own?

The Scooter Parts Registry is a free public record of the Chinese factories behind US-market scooters, ATVs and go-karts — brand, engine family, VIN prefix, factory and related machines. No account, no email.

thescooterparts.com/identify